COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
FIRST SET OF INFORMATION REQUESTS FROM THE D.T.E.
D.T.E. 04-57

Date: August 20, 2004

Witness Responsible: Joseph A. Ferro

DTE 1-6: Please refer to Exhs. BSG-1; BSG-3; and BSG-4.

(a) Explain whether the savings estimates for the energy saving programs are gross estimates or net estimates.

(b) Define the term "realization rates," used in Exh. BSG-4, and provide these rates for the measures included in the LBR calculation.

(c) Indicate the average life-span of each DSM measure included in the LBR calculation (see Exh. BSG-3, ln. 2-24). Explain how the Company determined the average life span for each measure.

(d) For each and every DSM program since their inception, provide the percentage of installed measures that have outlived their average life span.

RESPONSE:

(a) The savings estimates for the energy savings programs are net estimates. That is, the therm savings are the engineering based (impact analysis) theoretical savings adjusted by the realization rates.

(b) A realization rate for a particular measure is the ratio of the average therm savings recorded from field studies of actual measures installed to the engineering based average theoretical therm savings of that same measure.

See BSG-1, Attachment D for the realization rates by measure, by rate class. For example, realization rates for the measures installed in the residential heating class can be found on page 2 of 16 of the "Residential Rate M Calculation" section of Attachment D.

(c) See the table below for the average life-span of each DSM measure included in the LBR calculation.

Measure Code	Description	Average Life Span
AI	Attic Insulation	25
CT	Clock Thermostat	10
DI	Duct insulation	20
ID	Intermittent ignition device	10
NB	New Boiler	20
NF	New Furnace	20
PI	Pipe Insulation	20
WI	Wall Insulation	25
FA	Faucet Aerator	7
HP	Hot Water Pipe Ins	10
HW	Hot Water Heater Wrap	10
LF	Low Flow Showerhead	7
TT	Temperature Turndown	3
IB	Boiler Rebate - Gas to gas	20
IF	Furnace rebate - gas to gas	20
IG	Steam Boiler rebate	20
IH	Infrared Heating Rebate	20
IJ	Water Heater Rebate	10
IL	Boiler Rebate - oil to gas	20
IO	Furnace rebate oil to gas	20
IU	Boiler rebate – elec to gas	20
IY	Furnace rebate elec to gas	20

The estimated average life span values were determined in early stages of energy efficiency programs in the Commonwealth. These assumptions are reviewed from time-to-time using a collaborative process and with the help of consultants and other industry experts. These values are assumed to still be accurate and valid as recently as the last two energy efficiency program plans filed by the Company; DTE 01-27 and DTE 04-39.

(d) Bay State has not yet conducted the lengthy study to determine to what extent any percentage of the DSM measures installed since the inception of the Company's DSM programs have outlived the average life span of the measures. Bay State expects that it will begin a study to determine how such an estimate may be conducted before Bay State files its next five-year energy efficiency plan.

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DTE 1-7: Please refer to Exh. BSG-1; BSG-3; and BSG-4. Are the DSM measures included in the LBR calculation still cost-effective. Explain, and state how the Company determined the cost-effectiveness of each measure. Provide all data, worksheets, and assumptions used in the calculation.

RESPONSE: The DSM measures offered through Bay State's DSM programs are still cost effective. Bay State verified this most recently in developing Bay State's five-year Energy Efficiency Plan in DTE 04-39. Bay State's plan has been agreed to in settlement, and that settlement is now pending Department approval. In support of Bay State's plan, and at Bay State's request, outside consultant, GDS Associates, screened all residential and commercial programs for cost effectiveness and found that the mix of measures offered is robustly cost effective.

Attachment DTE 1-7 is Attachment C of the Bay State Gas Energy Efficiency Plan For the Period May 1 2004 – April 30, 2009, as filed in DTE 04-39. Table C-1 of this attachment is the summary of the cost effectiveness of all programs.

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DTE 1-8: Please refer to Exhs. BSG-1; BSG-3; and BSG-4, and to Bay State Gas Company, D.T.E. 03-36, at 4, n.3 (2004). If the Company did not include the therm savings from the additional measures installed between February 28, 2002 and August 31, 2002, in D.T.E. 03-36, explain whether Bay State included them as a reconciling adjustment in D.T.E. 04-57.

RESPONSE: Bay State did include the therm savings from the additional measures installed between February 28, 2002 and August 31, 2002. The updating of the Company's LBR data and model to include these additional measures does not impact this Filing in that, since the LBR associated with these measures are reflected in both the Non-RPM and RPM calculations, the exogenous effect is zero.

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DTE 1-9: Please refer to Exh. BSG-1, Att. A. Recalculate the adjusted and unadjusted ROE for 2003 to exclude the $2,169,462, which the Company is proposing to recover in this Filing. Use the same format as in Att. A to present your results.

RESPONSE: Please see Attachment DTE 1-9 for the requested recalculation. This recalculation excludes the $2,169,462 of the LBR from the adjusted ROE. To be clear, the requested recovery of $2,169,462 is and was included in the unadjusted or per-book 11.84% ROE set forth in Bay State's original filing. Therefore, no further calculation is necessary.

Bay State Gas Company
Return on Equity
For the Twelve Months Ended December 31, 2003

Ln. No.	Item (1)	Detail (2)	Total (3)	Elimination of LBR @ DTE 03-36 Booked 12/31/2003 (4)	Requested LBR (5)	Weather Adjustment (6)	Adjusted Totals (7)
1	**Net Utility Income Available for Common Shareholders**						
2	Total Utility Operating Income - Annual Return - Pg. 10, Ln 18		$ 30,560,368	$ (1,454,871)	$ -	$ (6,786,000)	$ 22,319,497
3	Plus:						
4	Amortization of Acquisition Premium	$ 11,126,708					
5	Service Quality Penalties	-					
6	Total	$ 11,126,708					
7	Other Taxes	$ (2,000,000)					
8	Income Taxes	$ 4,338,451		$ 570,673	$ -	$ 2,661,809	
9	Net Additions to Utility Operating Income (Lns. 6 & 7 - Ln. 8)		$ 4,788,257	$ 570,673	$ -	$ 2,661,809	$ 8,020,739
10	Less:						
11	Total Interest Charges - Annual Return - Pg. 10, Ln. 39	$ 10,512,608					
12	Dividends Declared - Preferred Stock	-					
13	Total	$ 10,512,608					
14	Utility Ratio (See Ln. 35 below)	91.72%					
15	Utility Interest Charges (Ln. 13 * Ln. 14)	$ 9,642,164					
16	Income taxes on difference (Ln. 13 - Ln. 15) * 39.225%	$ 341,432					
17	Net Utility Interest Charges (Ln. 15 + Ln. 16)		$ 9,983,596	$ -	$ -	$ -	$ 9,983,596
18	**Net Utility Income (Ln. 2 + Ln. 9 - Ln. 17)**		$ 25,365,029	$ (884,198)	$ -	$ (4,124,191)	$ 20,356,640
19	**Total Utility Common Equity**						
20	Total Proprietary Capital - Annual Return - Pg. 9, Ln. 13						
21	Balance Beginning of Year - Column (b)		$ 520,651,695				$ 520,651,695
22	Balance End of Year - Column (c)		$ 529,215,174				$ 529,215,174
23	Average (Ln. 21 + Ln 22)/2		$ 524,933,435				$ 524,933,435
24	Less:						
25	Average Preferred stock - Annual Return - Pg. 9, Ln. 4		-				-
26	Average Unamortized Acquisition Premium net of deferred income taxes		$ 291,311,230				$ 291,311,230
27	Total Average Common Equity (Ln. 23 - Lns. 25 & 26)		$ 233,622,205				$ 233,622,205
28	Utility Ratio (See Ln. 35 below)		91.72%				91.72%
29	**Total Average Utility Common Equity (Ln. 27 * Ln. 28)**		$ 214,278,286				$ 214,278,286
30	**Return on Equity (Ln. 18/Ln. 29)**		11.84%				9.50%

31	**Utility Ratio:**	Total	Less Acquisition Premium	Net
32	Utility Plant - Annual Return - Pg. 8, Ln. 2	$ 1,190,252,064	$ (443,450,716)	$ 746,801,348
33	Total Other Property & Investment - Annual Return - Pg 8, Ln. 8	$ 115,079,183	$ (47,650,509)	$ 67,428,674
34	Total	$ 1,305,331,247		$ 814,230,022
35	**Utility Ratio (Ln. 31/ Ln. 33)**			91.72%

Notes:
In compliance with the Department of Telecommunications & Energy's letter dated April 3, 2003.

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DTE 1-10: Please refer to Exh. BSG-1, Att. A, at 1 - 2.

(a) Explain how Bay State calculated the $1,318,491 shown in Line 18, Column 5.

(b) Explain how Bay State calculated the $(4,124,191) shown in Line 18, Column 6.

(c) Explain whether the 2003 ROE of 11.84 percent includes the $2,169,462 which Bay State is seeking to recover in this Filing.

RESPONSE:

(a) The $1,318,491 is the net result of the Lost Base Revenue amount of $2,169,462 (as developed in Attachment B and shown on line 2 of Attachment A) reduced by the applicable income taxes that Bay State will have to pay of $850,971. The income taxes are based on the effective Federal and State income tax rate of 39.225%, and is arrived at by multiplying the $2,169,462 by the 39.225%.

The 39.225% consists of a 35% Federal rate and a 6.5% State rate reduced by the Federal benefit of the state income taxes of 2.275%.

(b) The $(4,124,191) is the net result of the reduction in revenue of $(6,786,000) shown on line 2 for the colder than normal weather experienced in Massachusetts during 2003 offset by the increase in income taxes that Bay State would have had to pay if normal weather would have occurred. Please see item (a) above for an explanation of the income tax rate.

The Company has calculated the reduction in revenue of $(6,786,000) to normalize for colder-than-normal weather. The Company weather normalizes separately for each of the Residential and Commercial & Industrial rate classes, excluding the Extra High Annual C&I classes and special contract customers.

Temperature-sensitive volume is calculated each month by subtracting the level of base load observed during the previous summer. Temperature-sensitive load per effective degree day ("EDD") is scaled to the expected number of customers for the

upcoming year and is used to calculate the volumetric weather effect by multiplying it by the difference between actual and normal EDD. The gross margin associated with the volumetric effect is obtained by applying an incremental base, or net revenue, rate.

(c) The 11.84% ROE for 2003 does not include the $2,169,462 of exogenous LBR that Bay State is seeking to recover in this Filing. However, note that this 2003 ROE reflects the recovery of the exogenous LBR of $1,454,871 that was approved by the Department in DTE 03-36, and which is being recovered over the 12-month period of November 2003 through October 2004. Just as the Company recognized this one-time annual recovery of $1.4 million of exogenous costs, Bay State will recognize the additional revenue of $2,169,462 upon approval by the Department.